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ORIGINAL ARTICLES.

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ON THE TREATMENT OF DENDRITIC KERATITIS  
AND OF MARGINAL ULCER OF THE CORNEA  
WITH TINCTURE OF IODINE.\*

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MY experience for a number of years in the treatment of dendritic keratitis and of superficial rodent ulcer of the cornea was most unsatisfactory. Many cases were so protracted in their course that there was abundant opportunity for trying the ordinary remedies, all with more or less unsatisfactory result. The inflammation finally subsided in many cases because the disease had run its course and not as the result of the remedies employed. Among these, atropin, eser-in, bichloride of mercury, formaldehyde in solution, and

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\*Read before the American Ophthalmological Society, Washington, D.C., May, 1900.

ointments of iodoform, iodol, aristol, etc., are to be mentioned.<sup>1</sup>

Even the actual and the galvanic cautery often failed to prevent extension of the ulcer. In the belief that others have had the same unpleasant experiences, I am led to make the following communication, for I no longer look upon these cases with the dread of a long course of inefficient treatment resulting in great loss of vision from corneal opacities.

In August, 1898, Mr. G., came under my treatment for beginning dendritic keratitis. There was a small horizontal linear furrow on the inner half of the right cornea near the periphery and pointing toward the lower edge of the pupil. Atropin and iodoform ointment were used with good effect, apparently, but in a few days the ulcer reached the lower margin of the pupil, and one fine branch upward indicated that it was about to traverse the center of the pupil. I determined, therefore, not to delay any further, and wiped the entire ulcer with tincture of iodine. On the next day, finding that this remedy had caused but little irritation or pain, I repeated the application. On the following day the cornea was studded with fine points which rapidly developed into filaments, typical of filamentous keratitis; they were wiped off with cotton and touched with a 3-grain solution of nitrate of silver, and did not recur. The ulcer had, in the meantime, disappeared, and it left no trace. The vision of this eye is almost perfect.

The very favorable result of the treatment in this case induced me to try the same in others, and I have employed it in more than twenty-five cases of dendritic and rodent ulcers. It has never failed to bring relief. Not only was the further spreading of the ulcer prevented, but its peculiar character was changed to that of a single abrasion of the corneal epithelium which usually disappeared in a very few days. Nor have untoward symptoms ever manifested themselves excepting the appearance of filamentous keratitis in the one case mentioned above.

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<sup>1</sup>I have recently learned that Swanzy uses absolute alcohol, and claims that this rapidly cures the affection. See Swanzy's "Text-Book," Sixth Edition, page 196.

*Method of Application.*—A bit of absorbent cotton is wrapped firmly about a fine wood tooth-pick, so as to form a narrow, firm swab; this is dipped into the tincture of iodine and the excess allowed to drop off. The eye having been prepared, by instilling cocain and a drop of fluorescein, the ulcerated area is thoroughly scrubbed until a distinct brown discoloration of the tissues is seen. The neighboring epithelium is very much loosened and curls up in all directions. It is important to touch this and especially the minute infiltrations seen a millimeter or two away from the main line of ulceration; for the progress of the disease is usually this—that after these fine infiltrations are observed the furrowed ulceration soon makes its appearance. The only error which is likely to be made is to apply the iodine too cautiously, for I have never seen any ill effect from its being used too freely. Since I have become bolder in using it, it is rare that I need to make a second application. More than twice I have not applied it in any one case—it was never necessary.

The application is usually followed by some pain, lasting for a few hours, though I have sometimes been told by the patients that they suffered but little pain. The eye is bandaged and an ointment of boric acid, iodol or the like, is applied. The bandage can usually be dispensed with after a day or two, though it may be well to use the ointment a few days longer.

I should like to state here that I have been able to definitely associate dendritic keratitis with malaria in but a single case. The patient was treated with tincture of iodine and was well on the second day following. She was not, however, cured of the malaria for some time.

In order to determine the amount of damage that it is possible to do with the too abundant application of the tincture of iodine, I applied it to the eye of a rabbit. A healthy cornea was scrubbed with a firm swab saturated with the tincture until half of the cornea was denuded of its epithelium and then the rubbing was continued until this entire region was stained a deep brown. A little reaction followed and this portion of the cornea became the seat of a gray infiltration, but this was gradually absorbed and disappeared entirely in a few weeks.

It may surprise some to hear that I have treated such a large number of cases of dendritic keratitis in so short a period, for it is usually considered a rare condition. I ascribe my large number to the fact that I am in the habit of examining all corneal lesions with fluorescein and the loupe. In a number of cases seen with colleagues I have thus been able to determine the true character of an ulcer previously not recognized. Basing my statement, therefore, on experience, I desire to say that many cases looked upon as simple ulcers or as herpetic, are in reality dendritic.

An important reason for the careful differentiation of the various forms of keratitis is that the treatment I have given for dendritic keratitis is without effect in phlyctenular, serpiginous or other so-called infected ulcers, with the exception of marginal ulcers, of which I shall now speak.

I have notes of three severe cases of marginal crescentic ulcers which I have treated with tincture of iodine, with rapid and complete recovery in all. In two of these the membrane of Descemet were laid bare, and perforation was imminent. Two of the cases had been treated elsewhere for some time. The application of iodine was followed by rapid abatement of all the symptoms and with immediate improvement of the appearance of the ulcer.

Three cases may appear as scarcely sufficient evidence of the efficiency of the method. The change in the condition, however, was so striking that those who saw the cases agreed that in this disease, as in dendritic keratitis, tincture of iodine may be considered as a specific remedy upon which we may rely with confidence.

During the winter of 1898-99, Dr. Hiram Woods presented before the Maryland Ophthalmological and Otolological Society a case of dendritic keratitis which had resisted all treatment. Upon my suggestion he employed the tincture of iodine, and he has since told me that in this and other similar cases in which he employed it, its effect was most satisfactory.

Dr. Russell Murdoch has likewise employed this treatment in a number of cases of dendritic keratitis, and he

has permitted me to say that his experience has borne out my statements.

I do not desire to make it appear that I am introducing iodine in the treatment of diseases of the eye, for many of our works refer to its having been used. It is my purpose to define those cases in which it may be used and in which its usefulness can not be overstated.

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OBSERVATIONS ON SOME BLIND BUT QUIET AND  
APPARENTLY INOFFENSIVE EYES. DO THEY  
PRODUCE A PSEUDO-SYMPATHETIC  
INFLAMMATION?\*

By S. C. AYRES, M.D.,  
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**W**E ARE all disposed to treat blind but quiet and apparently inoffensive eyes kindly. We naturally consider a blind eye, which is free from inflammation and tenderness, not the probable source of trouble to the good eye, and it is better for the majority of our clients than an artificial eye. But are these blind eyes as inoffensive and free from danger as we are disposed to think? May they not exert some subtle influence, which we in our clemency have overlooked? That in many cases blind eyes remain in the orbits for an indefinite number of years and are not a source of irritation to the fellow eye, is a well-known fact. But are they all harmless? Are they all innocent because some have not been proven guilty of exciting trouble in the good eye?

CASE 1.—Right eye blind from incised wound, quiet and free from irritation for a period of fourteen years. Left eye: Very marked failure of vision; extensive exudations into the vitreous. Enucleation of the blind eye and recovery of vision.

G. W. D., 45 years of age, was examined in December, 1898, and gave the following history: He states that I examined

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\*Read before the American Ophthalmological Society, Washington, D.C., May, 1900.



him about fourteen years ago and I pronounced the right eye blind. It had been injured but was then quiet and free from irritation. As the left eye had perfect vision, he went on as usual and had no trouble with this good eye until October, 1897. The right eye is shrunken but not tender, except to firm pressure, and has never given him any trouble. Ossification of the choroid is detected upon pressure. In relation to the left eye he gave the following statement: The sight became suddenly very dim while working in a stooping position. Under treatment of a very competent oculist his condition varied, being at times better and then worse, but gradually grew worse, until when I saw him he had bare perception of light. With the ophthalmoscope a deep yellowish reflex is seen, but no vessels are visible. This yellowish mass seems to line the fundus like a membrane, and is fixed. In front of this is a grayish mass, which is quite movable and makes excursions from side to side. The eye is not painful nor is there any deep or superficial injection.

Enucleation of the right or injured eye was advised and consented to, and was performed at once. While the eye was not apparently a source of irritation to the left eye, I hoped its removal might have a salutary influence on the left eye. The patient's physical condition was good. After 14 months of confinement he was quite feeble, had lost flesh and his mental anxiety had disturbed him very much. So fearful was he of making his condition worse that he scarcely ever left his house, and hence got no exercise. Being practically blind, he always required the aid of some second person. He went home with instructions to take a vapor bath twice a week, and internally he was ordered 20 drops of dilute phosphoric acid. Six months later I saw him again. The mass which filled the eye had absorbed very considerably. There was now some depth to the vitreous chamber. The grayish mass was much contracted and floated around freely. The yellowish mass behind this was much thinner and looked like a paste which lined the inner surface of the globe. Not a vessel of the retina could be seen. His vision had much improved. Directly in front of him he could see objects quite clearly, but his field of vision was contracted so much that he could not walk alone in a strange place. Yet

with a stenopæic his vision was 0.5. As the stenopæic improved him greatly, I ordered one to be worn at his pleasure. His physical condition had also greatly improved and he was cheerful and hopeful.

He was examined again April 13, 1900, with the following result: His field of vision was greatly improved, being about half the normal, but restricted below and inward. His vision is 0.5, and he sees to walk the street without difficulty. There is still a grayish cloud close behind the lens, but it is thinner than it was nine months ago, when I last saw him. Downward and inward a red reflex can be seen.

CASE 2.—Loss of right eye; globe shrunken but free from tenderness or irritation. Twenty-three years afterwards the left eye was attacked by bullous keratitis, and later on there were exudations into the vitreous. Enucleation of the shrunken stump was followed by complete recovery of the left eye and restoration of former vision.

M. C., 55 years of age. The right eye was lost in his youth and gave him trouble occasionally until 1873, when he had secondary glaucoma. An operation was done for its relief, and the globe became shrunken. It was not in the least degree tender or sensitive. He suffered a traumatic cataract in the left eye, but made a good recovery, with a vision of 0.3 with +10 D. He had no trouble with the left eye from this time until December, 1896, when I treated him for bullous keratitis. The case hung on for about three months when he recovered and was not treated again until November, 1897. His vision was now considerably impaired. The vitreous was cloudy, and a grayish mass could be seen close behind the iris. This exudation increased to such an extent that he could not see to walk the streets alone. I advised the enucleation of the blind eye and he now consented, although he had declined before. The right eye was shrunken to a flat button of scleral tissue, having no semblance to an eye. The left eye began to clear up at once and within six months his vision was as good as it had been at any time since he recovered from the traumatic cataract. No internal treatment was given.

CASE 3.—Trauma of the right eye and loss of vision;

globe not sensitive or irritable. Two years later the left eye suffered from intraocular hæmorrhages and exudations, with impairment of vision.

S. W., 24 years of age, was injured in the right eye in January, 1897, the eye having been struck by the branch of a tree. The eye was very painful for a week or two but then quieted down; the sight, however, was lost entirely. The globe now diverges, the lens is opaque, and there are numerous posterior synechiæ, but the tension is normal and the eye quiet and free from irritation.

In April, 1899, the vision of the left eye suddenly failed, so that a person ten steps away could not be recognized. Two weeks later vision improved and in time became about as good as ever. On July 1st, while plowing, vision suddenly failed again, and I saw him July 15, 1899. The ophthalmoscope revealed an extensive hæmorrhage in the macular region, with haziness in this region, due to exudation. Two points of hæmorrhage stood out in front of the retina and there was some subretinal hæmorrhage. Vision 0.1. For several days general treatment was tried to improve the left eye, but without avail. I then enucleated the injured eye about August 1st. The effects were immediate, and I may say, striking. Within a week his vision improved from 0.1 to 0.4. He then returned home and has not been seen since. He is at work as usual and it is to be presumed that his vision has improved since he left, although I have no means of knowing what it is.

CASE 4.—Injury of the right eye in childhood. Lens calcareous and resting in the bottom of the vitreous chamber. Eye free from tenderness. Thirty-five years later exudations and hæmorrhages in the left eye. Enucleation of blind eye and improvement in vision.

A. P., 45 years of age, has an old calcareous lens in the bottom of the vitreous chamber of the right eye. The eye diverges but has never given her much pain and has always been free from irritation and inflammation. The injury was inflicted in childhood by a blow from a cow's horn. Her left eye is myopic 6 D. and she has worn glasses for many years. The ophthalmoscope shows some patches of choroidal atrophy, which are old, and also some recent ones. The vitreous



is full of floating opacities. V.=fingers at 2', with her myopia corrected. The eye has failed for some months past but more rapidly within the past few weeks, and her sight is now so bad that she can not see to do her work, which is ordinary housework. The retina is very much veiled by the turbidity of the vitreous, but the fundus can be seen indistinctly. The injured eye was not painful to pressure nor did it exhibit any evidence of inflammation. There was no scleral injection and no evidence of recent changes in the eye.

Enucleation of the blind eye was done at once in the hope that it might cut short or favorably influence the progressive trouble in the left eye.

She was not seen again until February 20, 1900. The following was the condition at that time: The vitreous is much clearer and the retinal vessels and the entire fundus can be seen more clearly than when the enucleation was done last April. There are numerous black flakes floating in the vitreous. A long, but narrow, black mass hangs down from the ciliary region immediately behind the lens. The posterior capsule of the lens shows a small star-shaped opacity in the center. Vision is now improved to counting fingers from 2' to 4' with her glasses. Stronger glasses do not improve her vision. She says that the eye is now much stronger than before the enucleation of the blind eye. Then she was conscious of gradual failure of her sight. Now her vision seems to be slowly improving and is nearly as good as it has been for some years past. She received no internal treatment.

CASE 5.—Loss of left eye from ophthalmia neonatorum; globe shrunken but quiet. Right eye had partial vision through an iridectomy made for visual purposes. Seventeen years later the right eye was attacked by secondary glaucoma; partially relieved by the use of eserine, but completely relieved by enucleation of the shrunken globe.

B. M., 20 years of age, had ophthalmia neonatorum in a very severe form, which resulted in total loss of the left eye. The right eye retained a portion of clear cornea, and when she was 5 months old I made an iridectomy upward; this saved her barely sight enough to see large objects indistinctly. Three years ago (1896) the right eye began to have attacks of secondary glaucoma, which threatened to destroy

what little sight she had. I treated her with eserine and under this she improved. While the left globe, which was shrunken but not sensitive, did not seem to be the cause of the irritation in the right eye, I presumed it might be, and recommended its enucleation. To this she would not consent at first, but after several attacks at intervals, she consented to the removal of the blind eye, and the operation was done in June, 1899. Since then the right eye has been quiet and entirely free from any tendency to secondary glaucoma. She returned to her school, where she now is.

CASE 6.—Sight of right eye lost from detachment of the retina. Submitted to operation for relief. Eye quiet and not sensitive. Two years later exudations into the vitreous of the left eye. Recovery of vision under treatment.

In the case of S. M., 50 years of age, the right eye is blind from excessive detachment of the retina. He has consulted the best authorities in this country and Europe in relation to his affliction. While abroad he was operated upon by one of the most eminent surgeons, but in spite of all treatment the detachment remained unimproved and the eye blind. In July, 1898, he had a "shower of soot," as he said, in his right eye, which alarmed him, but as it soon passed off and his vision returned he paid no attention to it. But soon another "shower of soot" came on and he consulted Dr. Vail. In the temporary absence of Dr. C. R. Holmes, I was called in consultation by Dr. Vail, and found the left eye in the following condition:

The vitreous was cloudy, being filled with dust-like particles and black strings, which moved freely, being in the anterior portion of the vitreous chamber. There was no appearance of exudation in the choroid, no hæmorrhage, and it was evident that the inflammation was in the anterior portion of the choroid or ciliary body. The eye cleared up promptly and later on his vision was 0.8 with correcting lenses. Since then the eye has remained quiet with very good vision.

Let us now analyze these cases. In Case 1, the trouble began in the fundus, with exudations and hæmorrhages; these increased in spite of treatment until his vision was reduced to the perception of motions of the hand. After the

enucleation of the blind eye the improvement was slow but gradual and in a year he had a central vision of 0.5 with a stenopæic. His peripheral vision was so poor that he could hardly go where he was not well acquainted. What effect the internal treatment had can hardly be estimated. I ordered the vapor baths thinking they might favor the absorption of the mass in the vitreous.

In the second case the improvement after the enucleation was steady, and within six months he regained his former vision and there has been no trouble with the eye since the enucleation, now nearly two and a half years ago.

In the third case the improvement after the enucleation of the blind eye was immediate, and within a week vision improved from 0.1 to 0.4, and is probably better now.

In the fourth case the improvement was all that could be expected, and her vision is now probably as good as it has been for some years past. In this eye there were changes in the choroid and also in the ciliary region.

In the fifth case, the tendency to secondary glaucoma subsided as soon as the shrunken globe was removed. In only one of these cases was there any internal treatment given.

In the sixth case, the right eye was blind from detachment of the retina, and had been operated on by punctures through the sclerotic, and injections into the vitreous. The left eye had first a "cloud of soot," which passed away, and then another one which alarmed him, and for which he was treated. In this case there were no hæmorrhages, but the vitreous was filled with black masses, which were noticeable in the anterior portion of the vitreous. The eye regained its former vision, and it may be presumption to say that his eye is still in danger from the injured eye; but the lesson drawn from the other cases leads me to believe that he is liable to suffer another and more severe attack unless he has the blind eye removed.

Were these cases simply coincidences? There seems to be a similarity in the disease. In Cases 1, 2, 3, 4 and 6, there were exudations into the vitreous, and in Case 3, seen in the acute stage, there were hæmorrhages in the region of the macula lutea. In Case 5, the cornea was so nebulous it was

impossible to see the interior of the eye. In the five cases operated upon there was relief after the enucleation of the blind eye and an improvement, if not a complete restoration of vision. Case 6 is still *sub judice*, and time can only tell whether another attack will occur.

These cases bear no resemblance to true sympathetic irido-cyclitis. The attack involves the posterior portion of the globe, and not the anterior. The ciliary region does not, from any physical sign, seem to be sensitive or show any external evidence of inflammation. Yet, in the five cases operated on there was relief. Was the blind but quiet eye guilty of exciting the disturbance?<sup>1</sup>

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NOTE ON THE PRESERVATION OF AQUEOUS SOLUTIONS OF THE EXTRACT OF SUPRARENAL CAPSULE.

By LUCIEN HOWE, M.D.,

BUFFALO, N. Y.

THE desirability of keeping solutions of the animal extracts unaltered, is too evident to require any elaboration. Especially is it convenient for the ophthalmologist to be able to preserve from decomposition for a considerable time the extract of suprarenal capsule. This can be accomplished by a method which has been employed during the past year or more for the solutions used at the Buffalo Eye and Ear Infirmary, and also by three other methods found while experimenting in this direction. In all of this, due credit should be accorded to Dr. Albert E. Hubbard, one of the assistant surgeons at the Infirmary, who has devoted much time and care to the subject.

It should be observed at the outset that there is quite a difference in the various preparations of the extract now on the market, the so-called dessicated extract being apparently

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<sup>1</sup>The description of the microscopical findings of several of these eyes, by Dr. A. Alt, will follow in a later No. of this Journal.



not as strong as another which is sold in tablets of 5 grains, each tablet corresponding, it is said, to about 50 grains of the fresh gland. These tablets have ordinarily been used.

The methods of preparation are as follows:

One-half dram of the extract is rubbed in distilled water to a paste, the water being added very gradually then, and afterwards until a fluid ounce of the mixture is made. This is placed in a capsule, gently heated over a gas jet at about 160°F. for fifteen to twenty minutes, and whatever amount is lost by evaporation is replaced by sufficient sterilized water to make again a fluid ounce. In that ounce 15 grains of boric acid are then dissolved. The solution is filtered, or only the clear portion used. Further precipitation usually occurs, but this solution will keep at ordinary room temperature, in well-corked bottles, for several weeks without apparent alteration either in its character or in its physiological effect.

It has proved so convenient and satisfactory that the method seems worthy of presentation, although probably a better one will be devised later. It is worth while to mention also three other methods by which the extract can be preserved, although in those forms it is more or less irritating. These are:

A. In the form of so-called ophthalmic discs. For this purpose it is only necessary to rub the powder into a paste with water, and add sufficient mucilage to cause the mass to cohere in the form of small wafers. A disadvantage of these discs is that they are rough, but if they be first moistened with a drop of water the roughness disappears and less irritation is caused.

B. Solutions of the extract will keep if they contain formaline in the proportion of 1 to 10,000, but even this small amount often causes pain and irritation to the conjunctiva.

C. Finally, the concentrated extract, in about 25 per cent. of glycerine appears to keep well, and can easily be diluted as required for use. But it also is somewhat irritating, and decomposes ultimately, though slowly.

By the method first described, however, or in the form of discs, we apparently have a convenient and satisfactory means of preserving the extracts for a considerable time.



## THREE CASES OF CHOROIDITIS IN YOUNG WOMEN.

BY J. E. JENNINGS, M.D.,

ST. LOUIS, MO.

AS IS well known, the choroid is the vascular coat of the eyeball and is peculiarly liable to inflammation and degeneration, the result of local or constitutional disease. The most common cause of choroiditis is syphilis, either inherited or acquired. Other causes in the order named, are: Tuberculosis, rheumatism and mal-nutrition. But from time to time the observer is confronted by a series of cases with no very characteristic symptoms, and in which the etiology is obscure. The following cases are of interest, as illustrating the later type of the disease.

CASE 1.—Miss E. P., 19 years of age, consulted me May 6, 1899, complaining of blurring of the sight of the right eye associated with black dots floating in the air. She is a tall, well-built girl, with light hair and blue eyes; she is of a highly nervous temperament and for the last three months has been under treatment for a slight goitrous swelling. Family history good. Vision of right eye  $\frac{5}{v}$ , vision of left eye  $\frac{5}{iv}$ . The ophthalmic examination of the right eye shows the vitreous to be filled with fine dust-like opacities, and in a line with the disc is a larger and rope-like string floating freely in the vitreous. A careful examination failed to show any evidences of choroiditis. Treatment consisted of absolute rest of the eyes under atropine and dark protective spectacles. Internally, protoidide, one-third of a grain, and iodide of potassium, ten grains, three times a day. In three months' time the vitreous was free from opacity and treatment was discontinued. Two months later the opacities were as bad as ever and becoming discouraged she determined to try osteopathy.

CASE 2.—Miss K. S., 19 years of age, consulted me February 17, 1900, complaining of dimness of vision of the left eye. She has light hair, blue eyes and appears to be in the best of health. She had pneumonia 12 years ago and la

grippe 4 years ago, from which time she dates the dimness of sight. Family history good, except that an uncle on her father's side and an aunt on her mother's side died of tuberculosis. Vision of right eye  $\frac{5}{IV}$ , vision of left eye  $\frac{5}{XL}$ . This dimness of vision in the left eye is in the form of a large central scotoma. The ophthalmoscopic examination shows dust-like opacities and a few larger semi-transparent flakes floating in the vitreous. The disc appears hazy on account of the vitreous opacities, and the veins are large and tortuous. Situated at the macula is a large oval, lemon-colored patch, about the size of the disc; this patch of choroiditis is seen to be of recent origin, because of its yellow color, the concealment of the choroidal vessels and the absence of pigment heaping, although there is a dirty haze over the spot from disturbance of the retinal pigment; furthermore the patch is on a level with the neighboring fundus and does not bulge backward, as is the case in old choroiditis. I am inclined to think this atrophic patch is the result of choroidal hæmorrhage. Treatment consisted of bichloride of mercury, one-twelfth grain and iodide of potassium, ten grains, three times a day. In all probability the changes noted above will go on to total atrophy of the choroid, and a permanent scotoma remain as a result of the disease. The vitreous opacities have disappeared completely after the use of creosote, showing an undoubted tubercular element in this case.

CASE 3.—Miss M. C., 18 years of age, consulted me March 5, 1898, for a mist in front of the left eye, associated with slight pain and redness. She has light hair, blue eyes, and is a remarkably healthy and beautiful girl. She has occasional headaches, and her mother tells me that for some time she has been under treatment for painful menstruation. Family history is as follows: The father died about five years ago of a cancer of the large intestine. The mother is a frail, delicate-looking woman, and suffers from dyspepsia. Of the three children—all girls, the oldest has a slight degree of exophthalmic goitre, the second has occasional attacks of nervous prostration, and the third is my patient. No history of syphilis or rheumatism, but the mother's brother died of tuberculosis. From infancy my patient has always been in good health. When about 8 years of age she fell out of the

second story window and struck a board walk, but was apparently uninjured.

Vision of the right eye: Objects directly in front of her are not visible, but in all other directions the field is normal. In other words, there is an absolute central scotoma. Vision of the left eye is  $\frac{5}{14}$  with  $+1.50 = \frac{5}{14}$ , or normal. The ophthalmoscopic findings are as follows:



FIG. 1.

*Right Eye.*—The right disc (see Fig. 1) is circular and of almost normal color. Starting from the center of the physiological cup is a spindle-shaped, semi-transparent cord which, passing well forward into the vitreous, sways about with the various movements of the eye; this is the rare condition known as a visible canal of Cloquet. In the macular region is a white perpendicular oval area of choroidal atrophy three times the size of the disc; it is sharply defined by a well-marked ledge, covered with large masses of coal-black pigment. The sclerotic within the affected area bulges backward to form what is known as a choroidal crater. The choroidal vessels are in some places freely exposed, in others entirely destroyed.

*Left Eye.*—The fundus of the left eye is hazy. A careful inspection shows numerous fine dots on the posterior surface of the cornea, and a very fine dust-like cloud, with whitish flakes, chiefly to the nasal side and in the anterior

portion of the vitreous. Associated with this condition are four or five large patches of pigment surrounded by pale yellowish rings on the nasal side, far out toward the periphery. As stated above, the vision of this eye was normal at the first examination, and when tested a few days ago, two years after, it was found to be  $\frac{5}{m}$ , or better than normal. This, to me, is remarkable, considering the ophthalmoscopic findings.

*Treatment.*—The treatment employed was as follows: Absolute rest of the eyes under atropine, with dark protective spectacles, for eighteen months. Internally, bichloride of mercury, one-twentieth grain, and ten grains of iodide of potassium, three times a day. At the end of six months protoiodide of mercury, one-eighth grain, was substituted for the bichloride. After eighteen months of treatment, while the disease had not progressed, very little improvement, if any, was noticed. For the past six months the atropine, dark glasses and all internal treatment has been suspended; notwithstanding this fact, no further progress of the choroiditis has been observed.

*Etiology.*—The etiology of this case presents many points of interest. Unquestionably the condition of the right eye is congenital. The presence of a visible canal of Cloquet, associated with a very large choroidal crater in the macula, and the presence of dense patches of black pigment about its borders surely point to prenatal inflammation. It is clearly not a coloboma of the choroid, for in coloboma the choroidal vessels are absent and the edges are not so thickly bordered with pigment. The choroiditis in the left eye, on the other hand, is of recent origin, but whether the same cause is operating after the lapse of 18 years, is a question which I am not prepared to answer.

## DRY TREATMENT OF DACRYOCYSTITIS.\*

By HAMILTON STILLSON, M.D.,

SEATTLE, WASHINGTON.

NICHOLAS SENN has for several years relied almost exclusively on dry treatment in the cure of fistulous tracts. To be sure, if a foreign body, necrosed bone, or similar cause needs especial attention it receives it surgically, but for the medication of the pyogenic walls of the fistulous tract irrigation is discarded, even for cleansing; the pus cavity is simply filled with a mixture of salicylic and boric acid, dry.

The theory of which Senn's treatment of fistulæ is based is the same as that which gave origin to the dry treatment of otitis media purulenta. Germs of all kinds require moisture for their growth. Simply depriving them of moisture arrests their growth.

As a corollary to the above it may be said that no aqueous solution used as an irrigant in a fistulous canal can cleanse the canal of bacilli, for the reason that the majority of them lies in the substances of the wall, and no antiseptic in aqueous solution can be strong enough to destroy the germs without destroying the tissues in which they reside.

Many of the mucous canals which become pyogenic can not be deprived of their moisture, since moisture is continually secreted by them or passes through them.

In urethritis, salpingitis, dacryocystitis, and the like, we have to deal with canals whose office is to convey a fluid. But in dacryocystitis, fortunately, we may, while preparing the canal for its proper function, do as we do in occlusion of a street sewer, turn the current into some other channel while removing the obstruction. We may cause the tears to flow over upon the cheek until the patency of the nasal duct is restored.

To entirely dry up the lachrymal canal by obliterating it is so easy that obliteration by cauterization was the first method employed for relief of abscess in the tear duct. It

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\*Read by title at the Fifth Annual Meeting of the Western Ophthalmologic and Oto-Laryngologic Association, St. Louis, Mo., April 5-7, 1900.



was practiced by Celsus more than eighteen hundred years ago, and is recommended by many leading oculists to-day. Haab, for instance, insists that if after a few efforts at probing with small probes and irrigating the canal it does not stay open it should be at once obliterated and the lachrymal gland removed by dissection.

But it should be a principle in surgery as in medicine to restore function when possible, and it must still be contended that in treatment of diseases of the tear duct restoration of function is usually possible. And if it be objected that in some cases even a year's time is required to accomplish the restoration of function, I have only to say that so long as the patient is willing to give this time, the oculist should be willing to give his services. It should be a motto with all of us, as it was with Virchow, "not the number, but the kind of cures we effect."

After trial of various expedients and after various modifications of different methods for the relief of dacryocystitis, the writer has come to rely upon the following method: In cases of acute dacryocystitis the nose is first rendered patent with extract of suprarenal capsule and cocaine, then cleansed with bichloride, glycerine and tannin, then into the lower nasal meatus at the mouth of the infundibulum, a pledget of cotton impregnated with a mixture of glycerine, bichloride, salicylic acid, iodine and oil of eucalyptus is inserted and left *in situ* until it becomes too moist to retain its place. It is removed and the process is repeated as needed. At the inner canthus the above ingredients made into a paste by being mixed with kaolin are applied on cotton and the pledget is replaced when it has become moist. Occasionally dry heat is applied over the cotton; internal medication is given for the cold or catarrh, for it must be remembered that the origin of dacryocystitis is in the nose and not in the eye.

In cases that have gone on to suppuration a similar treatment of the nose is instituted in the early stages of pus-formation. The same treatment will often be sufficient if, after the pus has become fluid, it is pressed on into the nose. If, however, from constriction of the canal the pus can not be squeezed on into the nose, it is aspirated out through the

punctum; the canal is rendered anæsthetized by means of suprarenal capsule extract and cocaine; the punctum is enlarged a little by means of a probe-pointed knife, and probes are introduced, beginning with a small, rather stiff probe, introduced entirely through the canal, followed by larger and larger ones at the same sitting, not stopping at the first sitting until one with a diameter of 4 mm., as a No. 16 Theobald probe, has been inserted. All these probes are first boiled in soap and water, or borax and water, are wiped dry on absorbent cotton, are then inserted into an alcohol flame and allowed to cool down to a point of heat consistent with comfort of the patient, that is to say, as hot as the patient can bear. The probes are introduced without having been anointed.

If the probe encounters exostoses or caries, the distance of these obstructions from the canthus is first measured with a bulb-pointed probe, then a stiff steel probe is introduced and, after being sure that the path it will take is the correct one, sufficient force is used to overcome the obstruction. It is necessary occasionally to make special probes out of knitting needles to suit the case in question, and the shape of the probe sometimes has to be modified to suit the case, as, for instance, to allow the probe to be struck with a mallet. Occasionally the end of the probe has to be chisel-shaped and made to drill its way through the exostosis. Whatever the requirements of the case, the first object of the whole procedure is to make the passage thoroughly open and to make it open as much by stretching as possible, for just as in the stretching of the sphincter muscle in the rectum in the operation for piles, so in the opening of the lachrymal canal our efforts should be to paralyze the passage open, so to speak.

When we are sure it is thoroughly open, application of the above-described kaolin paste to the external surface of the lids over the tear sac is made on cotton, and over the cotton a Japanese hand-warmer is applied.

I would say, in passing, that there are several preparations on the market which claim a formula similar to the mixture of antiseptics described above, among these may be mentioned antiphlogistine. This latter omits the bichloride and includes carbonate of iron and gaultheria. So far as the

writer can determine from experience, antiphlogistine is as beneficial as anything he can recommend. It should be used thoroughly, the inner canthus being filled with it, over which the cotton and hand-warmer are placed. The antiphlogistine will insinuate itself into the stretched canal, will cause the infiltrates to transude, where they will be absorbed by the cotton, and the hand warmer will evaporate them. If the hand-warmer should not evaporate them, the antiphlogistine should be renewed and the process repeated until the inflammation has subsided. When this occurs, as it usually does on the second day, the process of probing is repeated as before, using the suprarenal capsule and cocaine very cautiously, but not resting content until a 4 mm. probe has been passed. Less reaction will follow this time, and if such is the case less antiphlogistine need be used, and at subsequent probings little or no cocaine need be used.

The patient should be encouraged to endure as much of the pain as possible, since in the use of cocaine it is possible to contract the cocaine habit very quickly. The suprarenal capsule should be early discarded from the imminent danger of infection.

Any fistulous opening upon the cheek may be ignored, since when the patency of the tube is restored the fistulæ invariably close of their own accord. To be sure, if while closing, they threaten to produce an unsightly scar, the scar tissue may be excised and the edges of the wound brought together neatly. In the same way it may be assured that any pus that had formerly gathered in the canal will take care of itself, that is to say, will drain down and out by way of the nose, without having to be washed out.

It goes without saying that whatever disease may be found in the nose is to be attended to thoroughly and conscientiously while treating the dacryocystitis. Without attention to the nose good, permanent results in the tube can not be attained.

There are, therefore, three points which this paper would wish to bring out distinctly:

1. Thorough attention to the nose.
2. Thorough dilation of the canal.
3. Abolition of irritation.

## THE USE OF MERCUROL AS A VALUABLE, NON-IRRITATING ANTISEPTIC IN INTRAOCULAR SUPPURATIVE PROCESSES.\*

BY JOSEPH MULLEN, M.D.,

HOUSTON, TEXAS.

MERCUROL consists of a preparation of mercury in which its nuclein affinity has been satisfied. The non-neutralization of this affinity constitutes the irritating quality of the salts of mercury when used as antiseptics on mucous surfaces. The use of the mercurous or mercuric salts, especially the bichloride in sufficient strength to be of antiseptic value for intraocular purposes is contra-indicated, being extremely irritating, so much to that the asepsis produced is more than counterbalanced by the chemical irritation imposed upon the cornea, iris and ciliary body. Boric acid solution is the only antiseptic which can be used in the anterior chamber with any element of safety and assurance of non-irritation. Few consider boric acid as a potent antiseptic, particularly in processes characterized by marked staphylococcus infection. De Schweinitz (*Diseases of the Eye*, page 626) says, in relation to irrigation of the anterior chamber: "No strong antiseptic solution should be used, certainly never bichloride of mercury, which is liable to produce indelible staining of the cornea. If any liquid which deserves the name of an antiseptic is employed, boric acid may be tried, but even this is better replaced by boiled distilled water containing one-half per cent of the chloride of sodium."

The following cases will, it is hoped, demonstrate the non-irritability and at the same time the thoroughly antiseptic value of this preparation in suppurative processes involving the intraocular structures.

Charles B., 12 years of age, had an incised and infected wound of the cornea eight days before consultation. When first examined the eye was decidedly exophthalmic and bathed in copious pus; there was extreme chemosis, almost

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burying the cornea; the tension was +3; vision *nil*. The anterior chamber was filled with pus and the iris incarcerated in the wound, which traversed two-thirds of the cornea. There was intense supraorbital, ocular and temporal pain, and marked photophobia. He had slept very little since the accident.

The patient was given chloroform, the anterior chamber was opened, a large iridectomy performed, the lens delivered and the pus cleared away, after which the anterior and posterior chambers were irrigated with three ounces of a 2 per cent. solution of mercuriol. The same amount was used daily for two weeks, when all suppuration ceased and the wound in the cornea closed. The pain in the eye and in the supraorbital and temporal regions never returned after the primary irrigation.

At no time in the history of the case had there been symptoms of sympathetic irritation in the good eye. The parents had refused enucleation, and hence the above procedure was adopted to gain time for their consent, but the results were such an uncomtemplated surprise and proved so beneficial, beyond expectation, that removal of the eyeball will not be advised unless symptoms of sympathetic irritation should present, which is not at all likely at this date.

The solution should be made fresh every two or three days. Boric acid added (10 grains to the ounce), however, will maintain the clearness of the solution much longer.

John T., 45 years of age, had hypopyon of the left anterior chamber. Under cocain anæsthesia, the latter was opened, drained and thoroughly cleansed with a 50 per cent. solution of pyrozone, after which the cavity was carefully washed with two ounces of a 2 per cent. solution of mercuriol. The cornea healed kindly, with no re-formation of the hypopyon.



A VISIT TO THE NETHERLAND EYE HOSPITAL,  
UTRECHT, HOLLAND.\*

BY ELLET ORRIN SISSON, M.D.,

KEOKUK, IOWA,

Member of Ninth International Ophthalmological Congress.

**I**T WAS a beautiful morning in August that we left the hotel Pays Bas, and were driven through the streets of the quaint old town, along linden-lined avenues and across stone bridges spanning the deep, dark waters of the canals, past Oorsprong Park, on which faces the handsome residence of Professor H. Snellen, Sr. We had the pleasure of enjoying a morning call on the Professor, and found him as genial and courteous in his home as he is polished and learned in public life. His blue eyes twinkle and light up a classic face, a noble brow is surmounted with a wealth of white hair, which clusters in curls, and the warm grasp of his hand as he bade us welcome to his home and city, was characteristic of this great man.

Proceeding to the Eye Hospital, we were received with great cordiality by Professor Snellen, Jr., and shown over the Hospital by one of his gentlemanly assistants.

The new building of the Netherland Eye Hospital for the poor and unfortunate eye sufferers serves at the same time as a memorial hospital to the late Professor T. C. Donders, who was the first man in the Netherlands that commenced or invented the modern treatment of the eye; and he was also the man who built the first hospital in the Netherlands for eye sufferers, and in the same hospital he also commenced to teach the modern treatment of the eye, and for this reason a new building has been erected, which has a memorial front, to which the whole building corresponds.

The building is in the style of the early Netherland architecture, which is partly Gothic; the walls are of light brick with arches of the same material and keystones of Marley stones. The arches all stand on foundations of granite. In the middle of the projecting front is the main entrance; the large entrance doors are made of teak wood, which are

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beautifully carved. The main entrance has a frame of sandstone; there are seen ornaments of different kinds of architecture, and in the midst are seen the rays of the rising sun, a symbol of the coming light. On each corner there is a tower 40 meters in height, with very large windows of stained glass; they are supported by two columns of pressed brick. The simplicity and peculiar form proves the very highest skill in architecture.

The tower standing up to Donders street has a beautiful dial of polished lava, and the grand clock-work was a donation to the hospital. On each side of the tower are placed two stones, one with the inscription—"Nederlandsch Gasthuis voor Ooglijders, (Netherland Hospital for Eye Sufferers), and on the other stone, Professor Donders' motto—"Liefdadigheid is de grondslag van het geheel," (Charity is the foundation of all).

On the east wing is an octave tower surmounted by a slender and graceful spire; this side of the hospital is separated from the street by an iron fence, and from it there is a beautiful view of the Eastern Royal Way.

Inside of the hospital, also, all luxury is avoided, but the beautiful simplicity in the architecture gives a pleasant impression. The only real luxury to be found is plenty of room and light. The main entrance, as before said, is in a projecting front of the main building. When we enter the great corridor we see beautiful entrances on each side with porter's bureaux, joining right and left the wide corridor. One of the first things that attracts the attention of the visitor on entering, both because of its beauty and appropriateness, is a magnificent bass-relief, representing Professor Donders examining a charity patient; it is placed in the wall of the western tower. In the group one recognizes Professor Snellen, Sr., at that time Professor Donders' student; the whole is a work of the highest art and will well bear detailed study.

Opposite to the front door is the hall that leads to the lecture room. The lecture room, as well as all the large rooms destined for the treatment of the sick, have, in this building, the light from the north. From the lecture room we enter two dark rooms, each furnished with eight lamps. East of the lecture room is the clinic room where the board-

ing patients are treated; next to this is a waiting room, which gives access to the garden; this room is called the garden room. To the east of the lecture room is the polyclinic room, and opening into this we find a room for the treatment of children. The waiting room for the non-boarding patients is in the extreme end of the west wing; this division plan separates the home—and outside patients. They only come together when the professor shows them to the students.

The second floor is exclusively for operative cases, so that they remain more separate from the acute cases. The operating room is also on this floor. The windows of this room are all on the north side and provided with heavy curtains for the regulation of the light; as there is no cross light, it is evident that the surgeon can obtain a much better view of the cases. The walls, from the floor to the ceiling, are painted dark gray, the whole giving the impression of quietness and rest.

Both sides of the tower form stairways, which are open, giving a view of all the corridors.

These corridors also serve for the daily abode of the patients, their great length and width giving plenty of room to walk about.

All excessive light is tempered by curtains.

There is a large laboratory in connection with the hospital, which is well lighted.

In the rear of the wings are large balconies, where the patients are allowed to take refreshments.

In the basement we find the kitchen, and rooms for different purposes.

The entire building is heated by steam, and amply furnished with water, and has a fine sewer system.

The appearance of the building is church-like, or like a modern college or school.

It is impossible in this brief description to point out the beauties and conveniences of this model Eye Hospital. One must visit it in order to appreciate it. It certainly answers the purpose for which it was built, and may it always remain standing as a monument to the great and talented Donders, whose scientific work was the inspiration for its erection.

## MEDICAL SOCIETIES.

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### OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

*Thursday, May 3, 1900.*

G. ANDERSON CRITCHETT, M.A., F.R.C.S. Edin., President in the Chair.

#### CLINICAL EVENING.

#### OPAQUE NERVE FIBERS.

MR. NETTLESHIP read notes of two cases in which opaque nerve fibers were seen with the ophthalmoscope, but these patches were separated from the disc by a considerable interval. He exhibited drawings of one of these cases in which the condition was depicted at the time it was first seen, and when the patient had normal acuteness of vision. Another drawing taken three years later showed complete atrophy of the optic nerve, and the patch of opaque nerve fibers could only just be seen, having undergone atrophy with the rest of the nerve.

MR. ADAM FROST had seen a similar case in which, after atrophy of the optic nerve, the opaque nerve fibers had almost disappeared.

MR. DOYNE mentioned a case he had seen similar to those described by Mr. Nettleship in which optic neuritis came on. This subsided without causing atrophy of the nerve, and the patch remained as before.

#### OPTICAL IRIDECTOMY FOR LAMELLAR CATARACT.

THE PRESIDENT showed a boy for whom he had done optical iridectomy for lamellar cataracts. In such cases in which the opacity was central and the vision much improved by dilating the pupil, he much preferred this operation to that

of removing the lens. After the operation the patient saw  $\frac{6}{viii}$  and J. 1.

#### PROPTOSIS.

MR. REGINALD BICKERTON showed an elderly woman whose right eye, on stooping, became proptosed. The sight was defective owing to old ulceration. Under ordinary circumstances there was no enophthalmos. There was a double mitral murmur. In discussing the cause Mr. Bickerton thought that it was probably a vascular growth or else due to the too free communication between the orbital veins (which had no valves) with the cavernous sinus.

MR. DOYNE mentioned the case of a man, 25 years of age, who had suffered from a similar condition all his life. Without any obvious cause he suddenly got most severe proptosis with inflammatory signs in the orbit. These all subsided, but the eye became blind, and there was no longer any tendency to proptosis.

MR. JULER showed a case of proptosis with ophthalmoplegia externa. Five years ago the patient had a similar attack in the same eye, but the sight was not impaired. The pain was severe, but had subsided. Some proptosis and complete loss of movements persisted. The present attack began early this year. In March severe neuro-retinitis supervened. There was no definite history of syphilis or tubercle. Iodide of potassium had been given, but without benefit. The diagnosis of an inflammatory growth intimately involving the optic nerve was probable.

MR. BEAUMONT drew attention to what appeared to be a persistent pupillary membrane, and also to the high degree of hypermetropia, due, he thought, to the growth flattening the eyeball from before back.

MR. NETTLESHIP gave it as his opinion that the retina was really raised by an intraocular growth.

#### MACULAR COLOBOMA.

MR. W. T. LISTER showed a case of macular coloboma associated with old choroiditis. He thought that in this case the coloboma was of an inflammatory origin rather than developmental.



MR. LAWFORD discussed the matter, and was also inclined to look upon the origin of such as being inflammatory.

BERGER'S LENSES.

MR. KEELING (for Mr. Juler) exhibited Dr. Emile Berger's binocular and stereoscopic lenses. The instrument consists of two decentred convex lenses inclined horizontally to each other. The advantages over a simple lens were said to be the better perception of relief, and the fact that little or no accommodation was necessary.

NOTCH IN LID.

MR. TREACHER COLLINS showed a case with a congenital notch in the lower lid, with some want of development of the malar bone.

METALLIC DEPOSIT IN THE CORNEA.

MR. SIDNEY STEPHENSON showed a child with a metallic deposit on the cornea, which probably came about in the following manner:

The patient had suffered from trachoma, and for its treatment the solid stick of pure nitrate of silver had been applied by a practitioner, who had then washed the eye with sodium chloride. The cornea being abraded had got some chloride of silver deposit in it.

THE PRESIDENT thought that it might clear a good deal if left alone, and suggested that nothing should be done in order to remove it under six months.

CONGENITAL DISPLACEMENT OF THE LENS.

MR. RAYNER BATTEN showed a girl with congenitally displaced lenses, who had also aniridia and glaucoma. She was quite blind in one eye, and could only just perceive light in the other.

SARCOMA OF THE CHOROID.

MESSRS. HIGGINS and ORMOND exhibited a specimen of a spindle-celled sarcoma of the choroid which had been removed with the eye by Dr. Cole Baker, of Southsea, in November, 1897. The patient was still alive and well with no sign of recurrence.—*British Medical Journal*.

## ABSTRACTS FROM MEDICAL LITERATURE.

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By W. A. SHOEMAKER, M.D.,

ST. LOUIS, MO.

### THE ROLE OF TOXINS IN THE PRODUCTION OF CONJUNCTIVITIS.

Morax and Elmassian (*Ann. d'Oculist.*, August, 1899), after detailing their experiments, sum up the general results. By means of continued instillation into the conjunctival sac they have produced conjunctivitis in the rabbit with the living and dead cultures of the gonococcus, the bacillus of Weeks, the diplobacillus and the staphylococcus; also with the filtrate of these cultures. These organisms never multiply in the conjunctival sac of the rabbit, and hence the inoculation of their cultures under ordinary conditions does not give a positive result; nevertheless, the conjunctiva does react in the presence of the toxins of the above microbes, and in a manner very similar to the human conjunctiva; but, absorption being very slow, the contact must be prolonged. There is always an interval of at least two or three hours between the commencement of instillation and the onset of the symptoms. In the case of the diphtheria toxin this latent period is at least 12 to 20 hours. This is comparable with what happens after the instillation of jequirity, but a single drop of the latter applied for a few seconds suffices to produce the reaction. The reaction which the toxin sets up may persist a long time (this is the case in diphtheria, and in the instillation of jequirity or of snake poison) or very soon come to an end, as in the case of the diplobacillus and the bacillus of Weeks. In the case of the gonococcus the reaction persists a little longer. The toxins elaborated by the gonococcus, Weeks' bacillus and the diplobacillus have a much more feeble and limited action than the diphtheria toxin. Whilst in diphtheria the reaction produced may persist 48 hours, or more, after the disappearance of the diph-

theria bacillus, in blenorrhœa, acute and subacute conjunctivitis, the reaction strictly depends on the presence of the microbe, and ceases within a few hours of its disappearance from the conjunctival secretion.

#### THE FUNDUS OCULI IN AMAUROTIC IDIOCY.

Chas. H. Beard (*Journal of Nervous and Mental Diseases*, May, 1900) says the fundus is characteristic and unique. The disc is unusually clear, though there is no pronounced atrophy of the optic nerves; but the really characteristic features observed are around the yellow spot, which is the center of a liver-colored disc; this is surrounded by a zone of grayish-white, which extends for at least two-disc diameters, horizontally and somewhat less vertically, gradually fading away in the normal red-orange of the eye-ground. The livid disc is clear-cut and distinct, is larger than the fovea, masking all that space which is devoid of the ganglion cells. Another more distinguishing feature is the character of the white zone surrounding the center, which is nearly white at the circumference of the liver-colored disc, then gradually thins away to nothing.

#### LUXATION OF LENS AND ZONULAR CATARACT.

F. Weyman (*Ophthalmic Record*, May, 1900), from his observation and experience, concludes that in the vast majority of cases spontaneous lenticular dislocation is due to the same causes that produce zonular cataract. Zonular cataractous degeneration is only one of the congenital defects—myopia, weakness of the zonula of Zinn, etc., all, or most of these, may be present when the cataract is lacking, and the spontaneous luxation of the lens surrounded by its capsule does not, of necessity, or usually, develop a cloudy zone. If such is found, it should not be attributed to the dislocation, for a lens disturbed in its trophic relations usually degenerates locally at the point of capsular injury or irritation, or totally. Riordon and Jaeger have reported cases of capsular dislocation retaining perfect transparency for many years after.

Luxation into the anterior chamber should be attended to at once, as it is likely to cause injury to the cornea and iris.

Though extraction is the ideal proceeding, it should be abandoned in favor of reduction into the vitreous in the presence of the following conditions:

1. When the other eye is practically unserviceable and the extraction unduly dangerous.

2. When the lens has, without irritation, before receded back of the pupil.

With a loose iris, he believes dissection the best and safest plan.

CERTAIN CHANGES IN THE VESSELS AND VASCULAR  
COATS OF THE EYE WHICH ARE OF DIAGNOS-  
TIC AND PROGNOSTIC VALUE IN GENERAL  
DISEASE.

G. E. de Schweinitz (*Maryland Medical Journal*, June, 1900) summarizes his paper as follows:

1. Flitting conjunctival and episcleral congestions may be the only symptoms of masked gout.

2. Such congestions may be the prodromes of later gouty manifestations in the eye or elsewhere in the body, but also—and most importantly—may be the forerunners, associates or alternates of retinal vessel changes, which, in their turn, are the indications of general arterio-sclerosis of serious prognostic import.

3. The same conclusion applies to recurring subconjunctival and recurring subcutaneous palpebral hæmorrhages, which seem, however, to be related especially to the chronic form of nephritis, exactly as is the classical retinitis.

4. Inflammation, hæmorrhage and œdema, with exudation, are not necessarily the ophthalmoscopic signs of general arterial disease or of its special localization in certain organs, for example, the kidneys. It may be manifested with, perhaps, equal frequency by alterations in the walls of the retinal arteries, and changes in the course and caliber of the veins, together with signs of mechanical pressure where veins and arteries cross.

5. These retinal vessel changes may be present when ordinary physical examination does not reveal the signs of the endarterial change in the surface vessels of the body generally.